PRP COMMITTEE FOR THE NL INDUSTRIES/TARACORP SITE

Contact:

Louis F. Bonacorsi
Joseph G. Nassif
Coburn & Croft
Suite 2900
One Mercantile Center
St. Louis, Missouri 63101
(Phone) (314) 621-8575
(Fax) (314) 621-2989

Dennis P. Reis
Sidley & Austin
One First National Plaza
Chicago, IL 60603
(Phone) (312) 853-2659
(Fax) (312) 853-7036

January 13, 1995

BY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Susan Pastor
Community Relations Coordinator
Office of Public Affairs (P-19J)
U.S. EPA, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Re: NL Industries/Taracorp Superfund Site
Granite City, Illinois
Comments on the October 1994 Proposed Plan

Dear Ms. Pastor:

This document is submitted for inclusion in the Administrative Record for the NLIndustries/Taracorp Superfund Site in Granite City, Illinois by AlliedSignal Inc., AT&T Corp., Exide Corporation, Gould, Inc., Johnson Controls, Inc., and NL Industries, Inc. (the "Parties"). The document summarizes and draws conclusions from the following documents, which, except for document number 6, are also attached:

Expert

1. The Granite City Lead Exposure Dataset: IEUBK Modeling and Evaluation of Soil Lead as a Risk Factor, by TRC Environmental Corporation ("TRC"), 1/6/95 (hereinafter "TRC Report");

Expert

2. NL Industries/Taracorp Site, Granite City, Illinois: Comments Addressing the USEPA's Use of the IEUBK Model to Justify 500 ppm/Pb Soil Clean-Up Level, by Morgan, Lewis & Bockius ("MLB"), 1/13/95 (hereinafter "MLB Comments");

Experts

3. NL Industries/Taracorp Site, Comments to Proposed Plan, by McLaren/Hart Environmental Engineering Corporation ("McLaren/Hart"), 1/12/95 (hereinafter "McLaren/Hart Comments on Proposed Plan"), including:

   a. Review of Public Record Documents for the NL Industries/Taracorp Site, by McLaren/Hart, 1/12/95 (hereinafter "McLaren/Hart Record Review"); and

b. Comments on the Madison County Lead Exposure Study and Related Documents, by McLaren/Hart, 1/12/95 (hereinafter "McLaren/Hart Comments on Exposure Study");

4. Comments on Exposure Study by Dr. Ellen J. O'Flaherty, 11/22/94 (hereinafter "O'Flaherty Comments");

5. Remedial Cost Analysis, Granite City Lead Site, by REACT Environmental Engineers ("REACT"), 1/12/95 (hereinafter "REACT Cost Analysis"); and

6. Summary Report, Evaluation of USACOE Remedial Action Program, Granite City, IL, by Earth Sciences Consultants, Inc. ("Earth Sciences"), 1/13/95 (hereinafter "Earth Sciences Report").[1]

Background

On March 30, 1990, the United States Environmental Protection Agency ("U.S. EPA") issued a Record of Decision for the NL Industries/Taracorp Superfund Site in Granite City, Illinois ("Site"), which required the cleanup of property once housing a secondary lead smelter that ceased operating in 1983, as well as surrounding commercial and residential property. Relying solely on a guidance document issued shortly before,[2] in its January 10, 1990 Proposed Plan for the Site, U.S. EPA set the residential soil cleanup level at 500 ppm lead in soil. Despite comments addressing U.S. EPA's illegal reliance on a guidance document for setting residential soil cleanup levels, the lack of evidence in the record supporting the level, and evidence supporting a significantly higher cleanup level, U.S. EPA maintained the residential soil cleanup level at 500 ppm in its Record of Decision. The Parties, now defendants in an action by the United States to enforce the terms of a November 27, 1990 administrative order, have offered to perform the cleanup required by the Record of Decision, but have declined to clean up to a level of less than 1,000 ppm lead in soil based on their review of the rationale presented in the Record of Decision and all extant scientific evidence.

At the time of the Record of Decision, no health study had been conducted in the area of the Site. As a result, no site-specific data existed on which to base the need for a cleanup. As part of their good faith offer to perform the cleanup required by the Record of Decision, the Parties also offered to perform a health study. While U.S. EPA refused to entertain the offer, it did commission the Agency for Toxic Substance and Disease Registry ("ATSDR") to perform a study similar to that proposed by the Parties. Nevertheless, U.S. EPA stated that it would not allow the results of the study to influence its choice of remedies at the Site. The following comments expressly request U.S.

---

[1] The Earth Sciences Report is included with the City of Granite City's comments.

[2] The first U.S. EPA guidance on soil lead cleanup levels was entitled "Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites (OSWER Dir. # 9355.4-02, 1989)." It has been superseded twice since its use at the Site, but U.S. EPA has not placed in the record to date any explanation addressing whether the newer guidances should result in a different soil cleanup level. We presume that the decision document entered after the close of the comment period will address the current guidance. Nevertheless, we continue to note that overreaching reliance on a guidance in rendering an administrative decision can rise to the level of illegal rulemaking if U.S. EPA fails to evaluate site-specific evidence in an even-handed manner. McClouth Steel Products Corp. v. Thomas, 838 F.2d 1317 (D.C. Cir. 1988).

EPA to reconsider its 1990 decision based not only on the information it refused to consider in 1990,[3] but also on the results of the "Madison County Lead Exposure Study, Granite City, Illinois" (hereinafter "Exposure Study") and what has been learned about the contribution of lead in soils to lead body burden in the interim. They further request U.S. EPA to realistically evaluate its use of the IEUBK model in reaching decisions about soil cleanup levels. Even when properly calibrated, it is only one tool for evaluating the potential health effects of lead contamination. Nevertheless, even the IEUBK model suggests in the present case that the massive soil removal demanded by U.S. EPA will not significantly affect blood lead levels.

Results of the Exposure Study

The final version of the Exposure Study has not been released. However, the Parties reviewed the draft Exposure Study during the ATSDR comment period and did not submit comments because they believed the study ultimately adequately addressed the status of the children in Granite City. The results of the Exposure Study indicate that any significant increase in childhood blood lead levels in the area of the Site are directly attributable to the age of the housing stock and the accompanying problems with lead-based pigments in interior and exterior paint. In fact, the blood lead levels in the community closely match those of a similarly situated community.

U.S. EPA did submit comments which took issue with many of the methods and conclusions summarized in the Exposure Study. The Parties have reviewed U.S. EPA's comments. The documents attached to this summary, as well as those produced by the Exposure Study's authors in response to the comments, indicate that the comments generally demonstrate either a lack of understanding of the study or a failure to understand the use of statistical and analytical tools as applied in the study. Unfortunately, they also indicate a preconceived notion that soil cleanup levels for lead should be less than 500 ppm, no matter what the scientific data developed across the nation at various lead sites may indicate and no matter what those scientists who have worked as public servants or scholars and have followed such issues for the better parts of their careers may say. For purposes of the following discussion, the Parties assert that the conclusions of the Exposure Study are essentially correct. The conclusions reached by the Exposure Study and the documents attached to these comments conclude that it is not only unnecessary from a health viewpoint to undertake the cleanup as envisioned by U.S. EPA, it is also a waste of time and money.

Summaries of Attached Documents

The documents attached to this letter are briefly summarized below. The documents should be consulted for more detail.

1. The TRC Report

The TRC Report analyzes the Exposure Study, the use of the IEUBK model to successfully account for the blood lead distribution found around the Site, and the U.S. EPA critique of the Exposure Study. The authors conclude that the blood lead levels found at the Site are related most strongly to housing condition. The housing condition influences blood lead levels to the extent that many of the older residences are coated with paints which utilized lead-based pigments. These paints contribute to house dust which, in turn, is ingested by children. Not surprisingly, the blood lead levels in the area are consistent with the recent data compiled in the NHANES III data set for similar communities, which also typically contain older housing stock subject to the same concerns.

---

[3] The Parties to these comments expressly incorporate by reference their good faith offer dated August 31, 1990 and their comments to the administrative order dated December 20, 1990.

TRC's review of the IEUBK model demonstrates that Version 0.99d grossly overpredicts blood lead levels at soil levels in excess of 500 ppm. The overprediction can be explained and compensated for by adjustment of the absorption coefficient at appropriate levels of soil lead concentration. Calibration leads to a model run which replicates the Exposure Study data set. When the model is then used on the data set to replicate cleanup of houses included in the data set, it demonstrates that soil cleanup first will not result in an appreciable decrease in blood levels, second will not appreciably decrease the number of children with blood lead levels exceeding 10 μg/dl, and third can never reach U.S. EPA's stated goal of no more than 5% of the relevant population having blood lead levels in excess of 10 μg/dl. In fact, cleanup to 500 ppm rather than 1,000 ppm gains very little, despite the $14 million to $67 million extra expense identified in the enclosed REACT Cost Analysis.

Regarding U.S. EPA's critique, TRC questioned why U.S. EPA ran the IEUBK model without utilizing the site-specific data set for house dust available from the Exposure Study. Failure to use the data greatly skews the conclusions one can reach using the model and negates the conclusions drawn by U.S. EPA.

2. The MLB Comments

The MLB Comments conclude that the proposed 500 ppm cleanup standard is not appropriate for the Site for the following reasons. First, U.S. EPA has not demonstrated that the former smelter caused the soil lead levels at the Site because urban areas generally have higher soil lead levels anyway due to their history of heavy truck and automobile traffic (lead gasoline residue), older housing (lead paint), and various industries. Indeed, the Exposure Study demonstrates that soil lead levels and blood lead levels at the Site are typical of similar urban communities. In addition, U.S. EPA did not consider socioeconomic status and condition of housing even though both the Exposure Study and U.S. EPA guidance recognize the importance of these factors on blood lead levels. U.S. EPA also improperly discounted the beneficial effects of the follow-up counseling and education that was conducted as part of the Exposure Study.

The MLB Comments also conclude that, contrary to its own guidance, U.S. EPA improperly ignored the effects of lead paint in its application of the IEUBK model and, as a result, overpredicted the magnitude of the contribution from soil lead. In addition, the MLB comments question U.S. EPA's assumption regarding the effect of soil lead on dust lead. In assuming a soil to dust ratio of 0.70, U.S. EPA improperly ignored the effects of lead paint on dust lead.

3. The McLaren/Hart Comments on Proposed Plan, including the McLaren/Hart Record Review and the McLaren/Hart Comments on Exposure Study

McLaren/Hart analyzed the relevant documents in the Administrative Record as well as the Exposure Study, U.S. EPA's critiques of the Exposure Study, and the author's response to U.S. EPA's critique. McLaren/Hart concludes that the documents in the Administrative Record do not support the selection of a 500 ppm cleanup level for residential soils but rather support a cleanup level of 1,000 ppm or higher. Significantly, McLaren/Hart concluded that U.S. EPA did not properly take into account the potential for sources of lead other than soil, including paint. U.S. EPA also ignored other site-specific factors in choosing its cleanup standard at the Site.

McLaren/Hart also reviewed the Exposure Study and related documents. McLaren/Hart concluded that the Exposure Study was of high quality and the conclusions reached in the Exposure Study were supported by the data and the statistical analysis performed. McLaren/Hart also disagreed with the U.S. EPA critiques of the Exposure Study and concluded that, based on the Exposure Study: (1) the lead levels in children's blood in the Madison County study do not indicate an

imminent public health problem; (2) soil remediation is not likely to significantly reduce blood lead levels in children in general; and (3) soil remediation is not likely to significantly reduce blood lead levels in children with elevated levels of blood lead.

4. The O'Flaherty Comments

Dr. O'Flaherty reviewed the Exposure Study, the U.S. EPA critiques of the Exposure Study, and the author's response to those critiques.[4] Dr. O'Flaherty generally supported the quality of the Exposure Study as well as the conclusions in the Exposure Study and the statistical treatment of the data. However, Dr. O'Flaherty was particularly critical of U.S. EPA's critiques of the Exposure Study, stating that many of the criticisms by U.S. EPA miss the mark and do not seem connected to the section of the Exposure Study being commented upon. For example, Dr. O'Flaherty concluded that U.S. EPA commenters do not seem to understand that the Exposure Study design was not the *conventional environmental epidemiology study design* with an exposed community group and a control group.

In addition, Dr. O'Flaherty was extremely critical of the assessment of the Exposure Study conducted by A. H. Marcus. For example, Dr. O'Flaherty states that Dr. Marcus' conclusion that soil lead and dust lead are contributors to blood lead, based on similar patterns of decreasing concentration with increasing distance from the former smelter, is "absolutely unjustifiable" because such simple correlations cannot support such a conclusion. Dr. O'Flaherty concluded her comments by stating that the overall impression given by Dr. Marcus' reanalysis is that "the recommended soil remediation level was predetermined and that the reanalysis is "superficial and careless, and bears little if any relationship to the data from the [Exposure] study."

5. The REACT Cost Analysis

The REACT Cost Analysis reviewed in detail the U.S. EPA cost estimates and the amounts allocated for the remediation of the residential areas at the Site. REACT also conducted an independent cost estimate for the residential cleanup for both a 500 ppm soil cleanup level and a 1,000 ppm soil cleanup level.

REACT's analysis included, among other things, a review of the Explanation of Significant Difference ("ESD") issued by U.S. EPA in January 1994 and the delivery orders related to the removal action that was planned for seventy (70) residences in August 1994. REACT noted that U.S. EPA has been very inconsistent with its use of its own cost estimates, constantly changing the average per residence cost. In addition, REACT concluded that, based on delivery orders issued to date, U.S. EPA was allocating approximately two to three times the amount of money per residence than was actually needed, due in part to interagency mark-ups of contractor fees. As a result, the residential soil cleanup under U.S. EPA's management would cost as much as $53 million more than if the Parties conducted the same cleanup ($82 million vs. $29 million). REACT also concluded that U.S. EPA's property characterization was flawed, creating the potential that entire properties would be remediated where only hot spots exist.

In addition, REACT concluded that the estimated cost difference between a 500 ppm level and a 1,000 ppm level ranges from $14 million to $67 million. The $14 million difference is based

---

[4] Dr. O'Flaherty is an Associate Professor of Environmental Health and the Director of the Toxicology Training Program at the University of Cincinnati College of Medicine. Her curriculum vitae is included with her comments.

on a comparison of REACT's cost estimate for the 1,000 ppm standard ($15 million) to REACT's cost estimate for the 500 ppm standard ($29 million). The $67 million difference is based on a comparison of REACT's cost estimate for the 1,000 ppm standard ($15 million) to U.S. EPA's cost figures for the 500 ppm standard ($82 million). As noted above and in the other attachments, no statistically significant benefit in the protection of human health would result from the expenditure of this extra $14 million to $67 million.

6. The Earth Sciences Report

The Earth Sciences Report analyzes the removal action that was conducted by U.S. EPA, through the U.S. Army Corps of Engineers ("USACOE"), in August 1994 at certain residences in and around Granite City.[5] The original removal action was planned for approximately seventy (70) residences; however, only a few residences were completed as a result of the lawsuit filed by the City. See footnote 5.

The Earth Sciences Report identifies actual problems that were witnessed by Earth Sciences during the removal action. For example, the report concluded that air monitoring conducted by USACOE was inadequate for determining the lead levels to which on-site workers and nearby residents may have been exposed. In addition, the review of the work by Earth Sciences revealed the following problems during the removal action: (1) inadequate site security, including the presence of children at and around residences that were being cleaned; (2) cross-contamination of clean areas outside the excavation zone; (3) recontamination of the residences being cleaned up; and (4) damage to the City's infrastructure, including damage to sidewalks. The Earth Sciences Report is significant because it reveals the actual problems that will occur if the U.S. EPA Proposed Plan is implemented.

Choice of Residential Cleanup Level

In their good faith offer in 1990, the Parties committed to a compromise cleanup standard of 1,000 ppm lead in soil. The Parties continue to believe that the evidence, both in general and that specific to the Site, supports a considerably higher level. Evaluation of any cleanup remedy must be consistent with the National Contingency Plan, rules promulgated by the agency pursuant to CERCLA. The nine factors cited in the NCP for evaluation are: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume through treatment; (5) short-term effectiveness; (6) implementability; (7) cost; (8) state acceptance; and (9) community acceptance. The Illinois Environmental Protection Agency has not spoken recently on the matter of Site cleanup. We are aware that the agency did concur with the remedy five years ago. We do not know what the agency's position is today. Consequently, the Parties limit their analysis to the remaining eight factors.

1. Threshold criteria: overall protection of human health and the environment; and compliance with ARARs

As noted above, a 1,000 ppm cleanup standard is equally as protective of human health and the environment as a 500 ppm standard. The Exposure Study and the attached reports reveal

---

[5] The City of Granite City filed suit against U.S. EPA shortly after the removal action began and requested a temporary restraining order ("TRO") to halt the cleanup. U.S. EPA voluntarily agreed to stop the removal action until the hearing before the Court on the TRO. The parties reached a settlement at the hearing which generally stated that U.S. EPA would only conduct residential soil removal at a limited number of residences, and the City and the Defendants would be allowed to conduct a recontamination study on those residences.

that lowering the cleanup standard from 1,000 ppm to 500 ppm would not result in a statistically significant reduction in blood lead levels. In addition, a 1,000 ppm cleanup standard complies with ARARs to the same extent as a 500 ppm cleanup standard. For example, Illinois Department of Public Health ("IDPH") regulations use a level of 1,000 ppm for the permissible limit of lead in soil which is readily accessible to children. 77 Ill. Admin. Code sec. 845.50(b). IDPH actually increased the level from 200 ppm to the current 1,000 ppm level in February 1993, realizing that 1,000 ppm was sufficiently protective of human health and the environment.

2. Primary balancing criteria: long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment; short-term effectiveness; implementability; and cost

The long-term effectiveness and permanence criteria as well as the reduction of toxicity, mobility, or volume through treatment criteria would be satisfied to the same extent for a 1,000 ppm cleanup standard as it would for a 500 ppm standard. In addition, the short-term effectiveness and implementability criterion actually favor implementation of a 1,000 ppm standard instead of a 500 ppm standard. As noted above, the Earth Sciences Report reveals the serious short-term effectiveness and implementation problems associated with large-scale residential soil removal, including site security, cross-contamination, recontamination, and infrastructure damage. Furthermore, we understand that the City will be submitting comments amplifying the short-term effectiveness and implementation problems associated with residential soil removal, including traffic-related problems and the negative economic impact of the proposed cleanup.

In addition, the cost criteria in the NCP supports the 1,000 ppm standard over the 500 ppm standard. As noted above and in the REACT Cost Analysis, the cost difference between a 500 ppm standard and a 1,000 ppm standard ranges from $14 million to $67 million. This is an extraordinary amount given that no statistically significant reduction in blood lead levels would occur if a 500 ppm standard were chosen over a 1,000 ppm standard. CERCLA and the NCP mandate that U.S. EPA consider cost in selecting a Superfund remedy. Selecting a remedy that costs $14 million to $67 million more than an equally protective remedy would be a clear violation of this mandate.

3. Modifying criteria: community acceptance

Through two separate administrations, the City of Granite City has consistently voiced its objection to the 500 ppm proposed cleanup standard. For example, when U.S. EPA filed its lawsuit against the Parties, the City intervened as Intervenor-Defendants. In addition, when U.S. EPA began a removal action on certain residences in August 1994, the City sued U.S. EPA to stop the removal action. We also understand that the City will be submitting a separate set of comments today objecting to the 500 ppm cleanup level in the Proposed Plan. U.S. EPA quite obviously does not have community acceptance of its proposed remedy.

Conclusion

In sum, the Parties do not believe that the 500 ppm residential soil cleanup level as chosen by U.S. EPA in the Proposed Plan is appropriate for the Site. U.S. EPA's selection of the 500 ppm level as the final residential soil cleanup standard would violate the NCP and constitute arbitrary and capricious conduct. The Parties believe that a much higher standard would protect both human health and the environment and save at least $14 million to $67 million.

Sincerely,

Louis F. Bonacorsi

Joseph G. Nassif

Dennis P. Reis

Attachments

cc: John H. Grady, Esq.

0012200.01 January 13, 1995